

The forgoing embodiments are merely exemplary and are not to be construed as limiting the present invention of this disclosure. The present teachings can be readily applied to other types of apparatuses. The above description of the present invention is intended to be illustrative, and not to limit the scope of the claims. Many alternatives, modifications, and variations will be apparent to those skilled in the art.

**Please modify the abstract as follows:**

**ABSTRACT OF THE DISCLOSURE**

Disclosed is a method of manufacturing a semiconductor device. An A monoatomic dopant having a large high atomic weight and made of monoatomic is implanted to form an ion implantation layer, instead of using a dopant of a small atomic weight such as B or a molecular ion such as a BF<sub>2</sub> which has been usually employed, in case that the ion implantation layer is formed in order to control the threshold voltage of the semiconductor device. Therefore, in an annealing process for mitigating damage caused by ion implantation, it is possible to prohibit by maximum generation of a limit TED (transient enhanced diffusion) phenomenon of a of the dopant and prevent degradation of the film quality due to outgassing.